save 882349

SAVE 882349 COMPLETED.
SS 11?
stop hold

SESSION FINISHED 05/21/98 10:55 A.M. (CENTRAL TIME)
ELAPSED TIME ON INSC: 0.11 HRS.
ELAPSED TIME ON COMP: 0.09 HRS.
ELAPSED TIME ON WPIL: 0.07 HRS.
ELAPSED TIME ON THIS POWERSEARCH SESSION: 0.27 HRS.
ELAPSED TIME THIS SESSION: 0.29 HRS.
YOUR SESSION WILL BE RETAINED FOR 2 HOURS. THANKS FOR USING ORBIT!

-19- (COMP)
TI - EXPERIMENTAL INVESTIGATION OF THE SPATIAL STRUCTURE OF THE FIRST STOKES COMPONENT OF STIMULATED RAMAN SCATTERING.

-20- (COMP)
TI - USE OF CONFOCAL UNSTABLE RESONATORS IN A DOUBLE ROGOWSKI TEA CO//2 LASER.

-21- (COMP)
TI - COMPARATIVE STUDY OF DYE PRISM RING LASERS.

-22- (WPIL)
TI - Optical beam amplification and delivery system for laser signa transmission - generates and amplifies beam to high power level at central station and transmits beam to local stations

SS 11?
prt -2 5 7 11 16 fu

-2- (INSC)
AN - 4494384
ABN - A9322-4260F-003; B9311-4320G-022
TI - Partially coherent light generated by using single and multimode optical fibers in a high-power Nd:glass laser system.
AU - Nakano H; Miyanaga N; Yagi K; Tsubakimoto K; Kanabe T; Nakatsuka M; Nakai S
OS - Inst. of Laser Eng., Osaka Univ., Japan
SO - Applied Physics Letters, vol.63, no.5, pp. 580-582, 2 Aug. 1993
CP - USA
LA - English
DT - J (Journal Paper)
JC - APPLAB
NU - ISSN 0003-6951
PY - 93
TC - XP (Experimental)
CPN - 0003-6951/93/63(5)/580/3/ $6.00
AB - A simple and flexible method is presented for generating a partially coherent light which obtains the highly smooth focused beam pattern. The beam divergence of 32 times diffraction limited light having a spectral width of 1.6 nm has been easily and reproducibly achieved by injecting a laser pulse from an actively mode-locked Nd:YLF oscillator to a single mode optical fiber, coupled to a multimode optical fiber. Temporal evolution of the beam smoothing due to the induced incoherency was examined with temporally resolved measurements of the beam pattern. The partially coherent light was focused through a random phase plate after the amplification. Small-scale intensity perturbation in a focused beam pattern was greatly reduced. (15 Ref.)
IT - focusing; light coherence; neodymium; optical fibres; solid lasers
ST - laser pulse injection; high-power Nd:glass laser; partially coherent light; focused beam; beam divergence; spectral width; actively mode-locked Nd:YLF oscillator; single mode optical fiber; multimode optical fiber; beam smoothing; incoherency; random phase plate; amplification; LiYF4:Nd
CC - A4260F Laser beam modulation, pulsing and switching; mode locking and tuning;
A4210M Optical coherence in homogeneous media;
A4255R Lasing action in other solids;
A4281W Other fibre optical devices and techniques;
B4320G Solid lasers;

light; focused beam; beam divergence; spectral width; actively mode-locked Nd:YLF oscillator; single mode optical fiber; multimode optical fiber; beam smoothing; incoherency; random phase plate; amplification; LiYF4:Nd
CC - A4260F Laser beam modulation, pulsing and switching; mode locking and tuning;
A4210M Optical coherence in homogeneous media;
A4255R Lasing action in other solids;
A4281W Other fibre optical devices and techniques;
B4320G Solid lasers;
B4125 Fibre optics
MF - LiYF4:Nd/ss LiYF4/ss F4/ss Li/ss Nd/ss F/ss Y/ss Nd/el Nd/dop

SS 16?
prt -24 31 40 fu

-24- (INSC)
AN - 3175388
ABN - A88091852; B88045091
TI - Observed single-mode resonance in a multimode fiber generator.
AU - de Bougrenet de la Tocnaye JL; Pellat Finet P; Bondiou M; Alger M
OS - Groupe Opt. et Systemes de Commun., ENST de Bretagne, Brest, France
SO - Optics Communications, vol.66, no.2-3, pp. 97-99, 15 April 1988, A08
CP - Netherlands
LA - English
DT - J (Journal Paper)
JC - OPCOB8
NU - ISSN 0030-4018
PY - 88
TC - XP (Experimental)
CPN - 0030-4018/88/ $03.50
AB - The authors give some experimental results concerning the resonance properties of a weakly multimode fiber generator, where a photorefractive BGO crystal is used as a light amplifier within an optical fiber ring resonator. (8 Ref.)
IT - bismuth compounds; fibre optics; optical fibres; photorefractive effect
ST - single-mode resonance; multimode fiber generator; resonance properties; photorefractive BGO crystal; light amplifier; optical fiber ring resonator; Bi12GeO20
CC - A4265 Nonlinear optics;
A4281F Other fibre optical properties;
B4125 Fibre optics;
B4340 Nonlinear optics and devices
MF - Bi12GeO20/ss Bi12/ss GeO2/ss O20/ss Bi/ss Ge/ss O/ss

-31- (COMP)
AN - 98-254174764-M
JA - 9825
FS - EIM
TI - High-power single-mode fiber amplifiers using multimode fibers.
AU - FERMANN M E; GALVANAUSKAS A; HARTER D; MINELLY J D; CAPLEN J E
OS - IMRA America, Ann Arbor, MI, USA
SO - Conference on Optical Fiber Communication, Technical Digest Series 1998. IEEE, Piscataway, NJ, USA,98CH36177. p 39-40 (COFCEL)
CONF- Proceedings of the 1998 Optical Fiber Communication Conference, OFC'98, San Jose, CA, USA (1998 Feb 22 - 1998 Feb 27)
CN - 48261
SP - IEEE
LA - ENGLISH (EN)

prt -5 fu

-5- (INSC)
AN - 5026888
ABN - A9518-4260F-010; B9510-4320G-015
TI - Role of the gain profile and thermal lensing for diode pumping self-modelocked lasers.
AU - Hariharan A; Sucha G; Harter DJ; Squier J
OS - IMRA America Inc., Ann Arbor, MI, USA
SO - CLEO '94. Summaries of Papers Presented at the Conference on Lasers and Electro-Optics. Vol.8. 1994 Technical Digest Series. Conference Edition (Cat. No.94CH3463-7), pp. 328-329, Published: Washington, DC, USA, 1994, xvi+448 pp.
PU - Opt. Soc. America
CP - USA
LA - English
DT - PA (Conference Paper)
NU - ISBN 0780319710
PY - 94
CONF- CLEO '94. Summaries of Papers Presented at the Conference on Lasers and Electro-Optics. Vol.8. 1994 Technical Digest Series. Conference Edition (Cat. No.94CH3463-7), Anaheim, CA, USA, 8-13 May 1994, Sponsored by: Opt. Soc. America, IEEE/Lasers & Electo-Optics Soc, Eur. Phys. Soc. Quantum Electon. Div., Japanese Quantum Electron. Joint Group
TC - XP (Experimental)
AB - Summary form only given. Self modelocked Cr:LiSAF has the potential of generating pulses as short as those from Ti:sapphire, in addition to having an absorption profile conducive to laser diode pumping. Since laser diodes do not have the beam quality of ion lasers, we need to know the importance of the pump beam profile on selfmodelocking. In this paper the sensitivity of modelocking to different parameters in Ti:Al2O3, a well-characterized material, is used to highlight the conditions important to modelocking in different material systems. (4 Ref.)
IT - chromium; laser mode locking; optical pumping; solid lasers; titanium
ST - gain profile; thermal lensing; self-modelocked lasers; Cr:LiSAF; pulse generation; laser diode pumping; pump beam profile; Ti:sapphire; LiSrAlF6:Cr; Al2O3:Ti
CC - A4260F Laser beam modulation, pulsing and switching; mode locking and tuning;
A4255R Lasing action in other solids;
B4320G Solid lasers
MF - LiSrAlF6:Cr/ss LiSrAlF6/ss Al/ss Cr/ss F6/ss Li/ss Sr/ss F/ss Cr/el Cr/dop; Al2O3:Ti/ss Al2O3/ss Al2/ss Al/ss O3/ss Ti/ss O/ss Al2O3/bin Al2/bin Al/bin O3/bin O/bin Ti/el Ti/dop

SS 2?
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SS 1: HARTER DJ/AU (27)
INSC(27) COMP(0) WPIL(0)

SS 2?
diffract:(1n)limit:

*SEARCHING.....

B4125 Fibre optics
MF - LiYF4:Nd/ss LiYF4/ss F4/ss Li/ss Nd/ss F/ss Y/ss Nd/el Nd/dop

-5- (INSC)
AN - 3756398
ABN - A90152578; B90077032
TI - Single mode high-power diode laser array for optical communication.
AU - Wang SC; Stone RE
OS - Lockheed Palo Alto Res. Lab., CA, USA
SO - Proceedings of the SPIE - The International Society for Optical Engineering, vol.1218, pp. 278-284, 1990
CP - USA
LA - English
DT - PA (Conference Paper); J (Journal Paper)
JC - PSISDG
NU - ISSN 0277-786X
PY - 90
CONF- Free-Space Laser Communication Technologies II, Los Angeles, CA, USA, 15-17 Jan. 1990, Sponsored by: SPIE
TC - AP (Applications); PR (Practical); XP (Experimental)
AB - Single frequency oscillation with a near diffraction-limited beam pattern is demonstrated from an otherwise multimode and multi-lobe high power GaAlAs laser array using a self-injection locking technique. A single mode output power of 500 mW with a single lobe far field beam of 0.5 deg divergence angle was obtained. The single frequency laser array also shows high frequency modulation response with high modulation depth and low distortion that make this laser array a suitable candidate for optical communication applications. (6 Ref.)
IT - aluminium compounds; gallium arsenide; III-V semiconductors; laser mode locking; optical communication equipment; optical modulation; semiconductor junction lasers
ST - semiconductor lasers; diode laser array; optical communication; near diffraction-limited beam pattern; self-injection locking; single mode output power; single lobe far field beam; high frequency modulation response; high modulation depth; low distortion; high power GaAlAs laser array
CC - A4260F Laser beam modulation, pulsing and switching; mode locking and tuning;
A4260B Design of specific laser systems;
A4255P Lasing action in semiconductors;
A4280S Optical communications devices;
B4320J Semiconductor lasers;
B6260 Optical links and equipment
MF - GaAlAs/int Al/int As/int Ga/int GaAlAs/ss Al/ss As/ss Ga/ss

-7- (INSC)
AN - 3710529
ABN - A90124156; B90062695
TI - Single-mode resonator incorporating an internal multimode optical fiber and a phase-conjugate reflector.
AU - Luther Davies B; Liebman A; Maddever A
OS - Res. Sch. of Phys. Sci., Australian Nat. Univ., Canberra, ACT, Australia
SO - Journal of the Optical Society of America B (Optical Physics), vol.7, no.7, pp. 1216-1220, July 1990
CP - USA
LA - English
DT - J (Journal Paper)
JC - JOBPDE
NU - ISSN 0740-3224
PY - 90
TC - PR (Practical); XP (Experimental)

CPN - 0740-3224/90-/071216-20 $02.00
AB - Phase-conjugate mirrors (PCMs) can be used to correct for phase distortion introduced by optical elements included within laser resonators, enabling diffraction-limited output beams to be produced. A severe example of a phase-distorting medium that could be included within a resonator is a multimode optical fiber. The authors describe the operation of a resonator that contains such a fiber and uses a PCM to restrict the output from the fiber to the lowest-order transverse mode. The system thereby enables the output from laser to be transported to a remote location through the multimode fiber without loss of mode quality. The PCM was a high-gain passive PCM made from a barium titanate crystal pumped by a 60-mW single-mode argon-ion laser. (13 Ref.)
IT - barium compounds; laser cavity resonators; laser modes; mirrors; optical fibres; optical phase conjugation
ST - single mode resonator; phase conjugate mirrors; internal multimode optical fiber; phase-conjugate reflector; phase distortion; optical elements; laser resonators; diffraction-limited output beams; phase-distorting medium; lowest-order transverse mode; remote location; mode quality; high-gain passive PCM; 60 mW; BaTiO3 crystal; single mode Ar ion laser
CC - A4265F Optical phase conjugation;
A4260D Laser resonators and cavities;
A4281W Other fibre optical devices and techniques;
B4340 Nonlinear optics and devices;
B4320L Laser resonators and cavities;
B4125 Fibre optics
MF - BaTiO3/ss TiO3/ss Ba/ss O3/ss Ti/ss O/ss; Ar/el
POWR- 6.0E-02 W

-11- (COMP)
AN - 98-254174764-M
JA - 9825
FS - EIM
TI - High-power single-mode fiber amplifiers using multimode fibers.
AU - FERMANN M E; GALVANAUSKAS A; HARTER D; MINELLY J D; CAPLEN J E
OS - IMRA America, Ann Arbor, MI, USA
SO - Conference on Optical Fiber Communication, Technical Digest Series 1998. IEEE, Piscataway, NJ, USA,98CH36177. p 39-40 (COFCEL)
CONF- Proceedings of the 1998 Optical Fiber Communication Conference, OFC'98, San Jose, CA, USA (1998 Feb 22 - 1998 Feb 27)
CN - 48261
SP - IEEE
LA - ENGLISH (EN)
DT - CA (Conference Article)
CC - 744.4 Solid State Lasers; 741.1.2 Fiber Optics; 744.1 Lasers (General); 741.1 Light/Optics; 716.1 Information & Communication Theory
IT - *Fiber lasers; Optical fiber coupling; Amplification; Solitons; Laser pulses; Laser modes; Speckle; Bandwidth; High power lasers
ST - Speckle; Bandwidth; High power lasers
AB - Single-mode fiber amplifiers with large-core multimode fiber (MM) allow the direct amplification of diffraction-limited optical soliton pulses with peak powers up to 12 kW. Under single-mode (SM) excitation of a MM mode fiber, the amount of power propagating in the fundamental mode as a function of fiber length decreases due to micro-bending-induced mode-coupling. The fundamental mode is launched in these MM fibers with high accuracy by suppressing modal speckle by using broad-bandwidth excitation sources such as ultrashort pulses. The very large-core, low micro-bending fiber amplifiers allow the construction of a new generation of ultrahigh-power fiber laser systems. 1 Refs.
UP - 9825

DT - CA (Conference Article)
CC - 744.4 Solid State Lasers; 741.1.2 Fiber Optics; 744.1 Lasers (General); 741.1 Light/Optics; 716.1 Information & Communication Theory
IT - *Fiber lasers; Optical fiber coupling; Amplification; Solitons; Laser pulses; Laser modes; Speckle; Bandwidth; High power lasers
ST - Speckle; Bandwidth; High power lasers
AB - Single-mode fiber amplifiers with large-core multimode fiber (MM) allow the direct amplification of diffraction-limited optical soliton pulses with peak powers up to 12 kW. Under single-mode (SM) excitation of a MM mode fiber, the amount of power propagating in the fundamental mode as a function of fiber length decreases due to micro-bending-induced mode-coupling. The fundamental mode is launched in these MM fibers with high accuracy by suppressing modal speckle by using broad-bandwidth excitation sources such as ultrashort pulses. The very large-core, low micro-bending fiber amplifiers allow the construction of a new generation of ultrahigh-power fiber laser systems. 1 Refs.
UP - 9825

-40- (COMP)
AN - 92-04050904-X
JA - 9204
FS - EIX
TI - An erbium-doped multimode optical fiber amplifier.
AU - NYKOLAK G; KRAMER S A; SIMPSON J R; DIGIOVANNI D J; GILES C R; PRESBY H M
OS - AT&T Bell Lab, Whippany, NJ, USA
SO - IEEE Photonics Technology Letters v 3 n 12 Dec 1991 p 1079-1081 (IPTLEL)
LA - ENGLISH (EN)
DT - JA (Journal Article)
TC - A (Applications); T (Theoretical); X (Experimental)
NU - ISSN 1041-1135
CC - 741 OPTICAL TECHNOLOGY--Optics & Optical Devices; 717 ELECTRONICS & COMMUNICATIONS--Electro-Optical Communications
IT - *OPTICAL FIBERS--Doping; FIBER OPTICS--Amplification; OPTICAL COMMUNICATION EQUIPMENT
ST - SINGLE MODE FIBERS; FIBER AMPLIFIER; ERBIUM DOPED FIBERS
AB - The authors describe the first experimental study of an erbium-doped multimode fiber amplifier. The focus has been to characterize an intermediate core erbium-doped optical fiber, a fiber that is capable of propagating many guided modes at both the signal and pump wavelengths, and to determine the feasibility of using such an active fiber as a multimode fiber amplifier, by measuring its gain, noise, and pump power requirements. For a 2-m length of a 13- mu m-core erbium-doped fiber, the authors measured gain as high as 16 dB at a signal wavelength of 1543 nm, with approximately 100 mW pump power (980 nm). For these same test conditions, the smallest excess noise factor beta was 42. 9 Refs.
UP - 9204

SS 16?
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SS 1: HARTER DJ/AU (27)
INSC(27) COMP(0) WPIL(0)
SS 2: DIFFRACT: (1N) LIMIT: (4876)
INSC(2778) COMP(1825) WPIL(273)
SS 3: MODE (1N) LOCK: (12707)
INSC(7018) COMP(4951) WPIL(738)
SS 4: MODE (1N) CONVERT: (3173)
INSC(1078) COMP(749) WPIL(1346)
SS 5: 2 AND 4 (0)
INSC(0) COMP(0) WPIL(0)